



SUNRISE ESTATES STORMWATER NEWS



August, 2011

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Residents of Sunrise Estates:

Hello and good day.



I am your Stormwater Coordinator. My job is to ensure that our county meets the federal and state requirements to keep our rivers clean by managing runoff and reducing pollution. When I started with the county, the runoff at Sunrise Estates was the number one problem discussed at Public Works. So with the help of several partners, we put together a grant to try to help you out. We received funding from the Missouri Department of Natural Resources (DNR) in March of 2011. Now we are moving forward with this exciting project.

I know we can improve the conditions in your neighborhood. Please call or email if you have any questions. The Sunrise Estates website will also be a great

INSIDE THIS ISSUE

Greetings to the Residents of Sunrise Estates	1
Together We Can Make a Difference	1
Grant Details	2
Climate Station to Provide Weather Data	2
Vocabulary and Measurable Goals	3
Build-A-Barrel Workshop	4
Non-profit to Help Install Retrofits	4

source for updates and information. To my knowledge, nothing like this has been attempted in this area. We are bound to make some mistakes along the way, but keeping the residents of Sunrise Estates informed will not be one of them.

Sincerely,
Georganne Bowman
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Together We Can Make a Difference

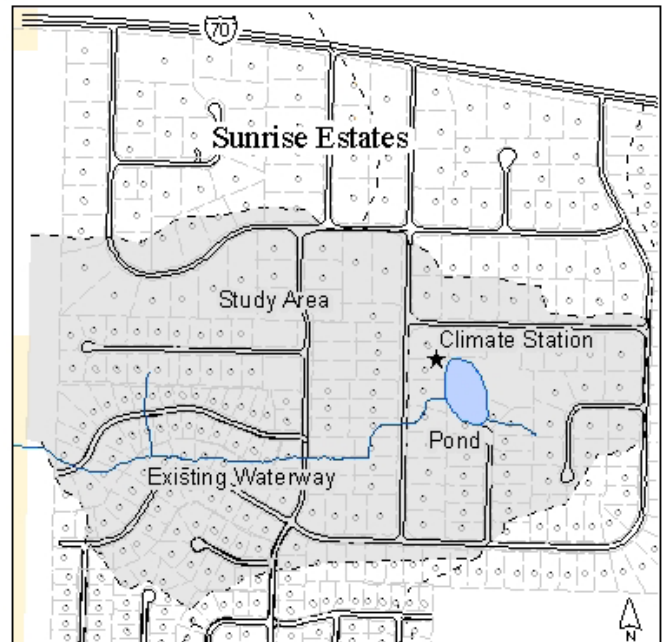
By Georganne Bowman

Stormwater runoff is a tricky problem at Sunrise Estates. during the next three years we have a fantastic opportunity to measure changes in stormwater management over time.

We all know every rain event is different. A slow steady rain has more opportunity to soak into the ground. But a downpour often sends water rushing down the street within just a few minutes. There are many factors that influence the amount of water that runs off your property during a storm. A very general way to think about water flow is $P = Q + E + \Delta S$

Where

- P is precipitation
- Q is runoff
- E is evaporation and transpiration (water used by trees and other vegetation)
- ΔS is the change in storage (soil, rain barrels, canopy or detention)



Map created by Heather Schaffer

Please see *Making a Difference* on page 3

Hinkson Creek Urban Stormwater Retrofit Grant Details

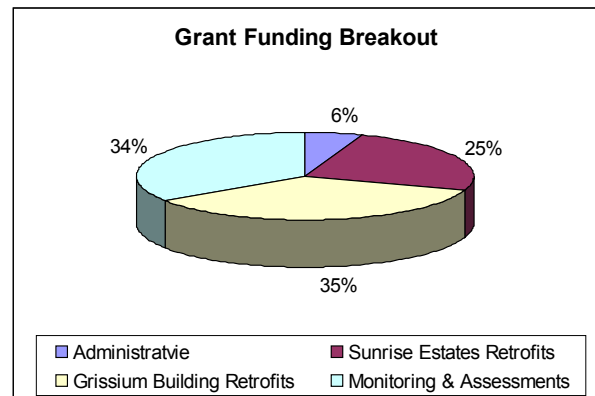
By Georganne Bowman

Funding Source

This federal money originates from the Environmental Protection Agency (EPA), and is administered by Missouri Department of Natural Resources (DNR). Boone County, the project sponsor, has enlisted help from numerous partners. These including DNR, City of Columbia, Missouri River Community Network (MRCN), JobPoint, Missouri Society of Professional Engineers (MSPE), and a long list of others.

Funding Amount

The total grant amount is \$713,000, with a required match of \$526,000. There are several projects, so that entire amount is not available for Sunrise Estates. The chart shows the funding breakout.



Project Description

The goal of the project is to reduce flooding, and improve water quality in Boone County. This will be accomplished with three main components.

1. SUNRISE ESTATES was built without stormwater controls. Residents experience problems with erosion, flooding and standing water. To reduce flooding, 65 rain gardens/rain barrels, 60 tree plantings, and three community water treatment features will be installed over the next three years. Since many of these retrofits will occur on private property, this will be done on a volunteer basis, with cost-share.

2. THE GRISSUM BUILDING currently houses the City of Columbia's Public Works Department. This site does not treat stormwater runoff. During this project the parking lot will be retrofitted with several stormwater practices.
3. The final component is MONITORING the effectiveness of these stormwater practices. The information provided will help engineers, developers, city staff, and local stormwater managers, so they can make informed decisions based on local conditions, (soils, rainfall, cost to install and maintain, public acceptance).

Grant Timeframe

This grant is scheduled to end by April 2014.

Climate Station to Provide Weather Data

By Matt Fox



Standing in front of the new climate station at Sunrise Estates are (from left): Bob Tripp, President of the Sunrise Estates Homeowners Association; Georganne Bowman, Boone County Stormwater Coordinator; Chris Zell and Nick Muenks, Geosyntec Consultants technicians.

The Hinkson Creek Urban Stormwater Retrofit Project has installed an electronic climate station in the neighborhood (near the community park). The equipment, a Hobo U30 Station manu-

factured by Onset Computer Corporation, measures several environmental phenomena, including the intensity, duration and amount of rainfall, wind speed and direction, relative humidity, temperature and solar radiation. The data gathered by the station is then transmitted to <https://www.hobolink.com/p/d6e8c67e0df65682779f62c31a15fe3e>, where it can be viewed by the public.

If you are a Sunrise Estates Association member and would like to receive weather updates from the climate station, please complete the request form at http://sunriseestates.net/?page_id=177.

Making a Difference from page 1

Over the next three years, Scientists working in Sunrise Estates will attempt to quantify these parameters. Precipitation will be measured at the climate station installed near the park. Runoff will be measured at the bridge on Suncrest. During the project, we will try to change the other two factors to see if we can have a positive effect on reducing runoff and flooding.

With your consent and help, we will install rain barrels and rain gardens to capture water. Additional vegetation will be planted to increase transpiration to move water out of the watershed. Several community stormwater features will be built to slow down the water and reduce erosion. These community features may include stream bank stabilization projects or prairie plantings. We will also work with homeowners to shape up their lawns. Workshops in the spring will focus on soil testing, aeration, and proper fertilizer use. This should help reduce soil compaction and increase root growth.



A small stream flooding Sunrise Estates in the 500 block of Broadview Street after February's snowmelt. Photo by Bob Tripp



Sunrise Estates location in the Hinkson Creek Watershed.
Map created by Heather Schafer

New Vocabulary

Stormwater – Rainfall that runs off roofs, lawns and other surfaces flows into gutters, streets, creeks, rivers and eventually into the Missouri River. This water can carry contaminants such as cigarette butts, plastic bottles, pet waste, nutrients and heavy metals.

Watershed or drainage basin is an area of land where surface water from rain and melting snow or ice converges to a single point.

Runoff – Rainfall that is not caught by vegetation or absorbed into the soil.

Cost-share – A general term that can describe virtually any type of arrangement in which more than one party supports research, equipment acquisition, demonstration projects, or programs.

Erosion - the process in which soil, sediment, rock and other materials is weathered and transported by water and wind.

Practice	Goal	# Installed/planted
Rain Barrels	25	0
Rain Gardens	20	0
Community SW Feature	3	0
Tree Plantings	60	4

Build A Rain Barrel Workshop



When: Saturday, August 20, 2011

Where: Sunrise Estates Park Pavilion

At: 10:00 - 11:00 a.m. or 11:00 - 12:00 p.m.

Why Use Rain Barrels?

- Rain barrels conserve water and help lower costs (a rain barrel can save 1,300 gallons of water each year).
- Rain barrels can reduce flooding and erosion in local water ways by reducing storm water runoff.
- Rain barrels reduce water pollution by lessening storm water runoff, which can carry pollutants from roads, lawns and driveways into the local stream.

To register, call Missouri River Communities Network at (573)256-2602 (limited to 20). This workshop is available to Sunrise Estates residents at a discounted price of \$20. At the end of the workshop, you will be able to take home your own rain barrel!

Non-profit to Help Install Stormwater Retrofits

By Steve Johnson

Missouri River Communities Network (MRCN) is a non-profit organization enhancing stewardship of the Missouri River. In this area of Missouri, all streams empty into the Missouri River pretty quickly. We helped start Missouri River Relief ten years ago and since then we have removed hundreds of tons of trash from the river. Five years ago we started the Missouri Clean Water AmeriCorps Program which has sponsored AmeriCorps members to work with non-profit organizations around the state. Here in Columbia we partnered with the City of Columbia and Boone County to install four institutional rain gardens and nine residential rain gardens. We have been promoting, building and selling rain barrels in Columbia for four years. We are excited to be a part of this project. MRCN will be working with residents in Sunrise Estates to help install rain barrels, rain gardens, plant trees and present educational workshops. If you have any questions about the project at any time please call Steve Johnson at 573-256-2602 or email at: manitoubluffs@gmail.com.



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